

Soft-Minder® Twin Plus

Automatic Water Softeners

Specifications and Operating Data

Twin Tank Models	Exchange Capacity ¹ @ Salt Dosage			Service Flow Rates ^{2,3}		Pipe Size	Resin Qty	Softener Tank Size	Brine Tank Size	Approx. Ship. Weight
	Minimum	Standard	Maximum	Peak Flow	Cont. Flow					
	gr @ lb g @ kg	gr @ lb g @ kg	gr @ lb g @ kg	gpm m ³ /hr	gpm m ³ /hr					
SMF-185	60,000/18	75,000/30	90,000/45	40	30	1.5	3	14 x 65	24 x 42	600
	3,888/8.2	4,860/13.6	5,832/20.4	9.1	6.8	1.5	85	356 x 1,651	610 x 1,067	272
SMF-245	80,000/24	100,000/40	120,000/60	40	30	1.5	4	16 x 65	24 x 42	680
	5,184/10.9	6,480/18.1	7,776/27.2	9.1	6.8	1.5	113	406 x 1,651	610 x 1,067	308
SMF-365	120,000/36	150,000/60	180,000/90	40	30	1.5	6	21 x 69	24 x 48	815
	7,776/16.3	9,720/27.2	11,664/40.8	9.1	6.8	1.5	170	533 x 1,753	610 x 1,219	370

¹ Exchange capacities based on treating water containing 10 grains per gallon (171 mg/l) of hardness (expressed as calcium carbonate), free of color, oil, turbidity and at a service flow rate of approximately 50 percent of the peak flow rate. These are nominal capacities and will vary with influent water characteristics, water temperature and other factors.

² Operation of a softener at peak flow rate for extended periods of time may result in a slight reduction of softening capacity. This is due to premature hardness breakthrough. Peak flow shown is at a 25 psi (172 kPa) pressure loss. Continuous flow shown is at a 15 psi (103 kPa) pressure loss.

³ The service flow rate is based on one tank regenerating while the other tank is delivering soft water. Performance is slightly improved when regeneration is complete and the non-service tank is in standby.

⁴ It is recommended that the frequency of regeneration be limited to once every eight hours.

NOTE: Operational, maintenance and replacement requirements are essential for this product to perform as advertised. Specifications shown are for twin models.



Commercial Systems
 ©2004 Culligan 5/04
 1-800-Culligan
 www.culligan.com

CULLIGAN LIFETIME LIMITED WARRANTY

SOFT-MINDER[®] TWIN PLUS /HI-FLO[®] 3 WATER SOFTENERS

You have just purchased one of the finest water conditioners made. As an expression of our confidence in Culligan International Company products, your water conditioner is warranted to the original end-user, when installed in accordance with Culligan International Company specifications, against defects in material and workmanship from the date of original installation, as follows:

For a period of ONE YEAR	The entire unit
For a period of THREE YEARS	The control valve body, but excluding its internal parts
For a period of FIVE YEARS	The fiberglass-reinforced conditioner tank*
For a period of FIVE YEARS	The conditioner tank if it has an epoxy-phenolic coated interior
For the LIFETIME of the original consumer purchaser	The Tripl-Hull[™] conditioner tank

*The tank must be protected by a vacuum breaker device as described in the unit's operating manual. Damage to the tank caused by vacuum is not covered by this warranty. The unit must be used in operating conditions that conform to Culligan's recommended design guidelines.

If a part described above becomes defective, within the specified period, you should notify your independently operated Culligan dealer and arrange a time during normal business hours for the dealer to inspect the water conditioner on your premises. Any part found defective within the terms of this warranty will be repaired or replaced by the dealer. You pay only freight from our factory and local dealer charges.

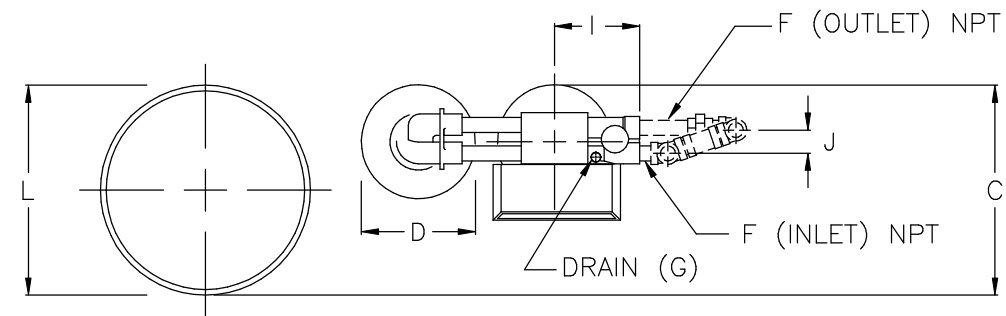
We are not responsible for damage caused by accident, fire, flood, freezing, Act of God, misuse, misapplication, neglect, alteration, installation or operation contrary to our printed instructions, or by the use of accessories or components which do not meet Culligan specifications, is not covered by this warranty.

Our product performance specifications are furnished with each water conditioning unit. TO THE EXTENT PERMITTED BY LAW, CULLIGAN DISCLAIMS ALL IMPLIED WARRANTIES, INCLUDING WITHOUT LIMITATION WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE; TO THE EXTENT REQUIRED BY LAW, ANY SUCH IMPLIED WARRANTIES ARE LIMITED IN DURATION TO THE ONE-YEAR PERIOD SPECIFIED ABOVE FOR THE ENTIRE CONDITIONER. As a manufacturer, we do not know the characteristics of your water supply or the purpose for which you are purchasing a water conditioner. The quality of water supplies may vary seasonally or over a period of time, and your water usage rate may vary as well. Water characteristics can also differ considerable if your water conditioner is moved to a new location. For these reasons, we assume no liability for the determination of the proper equipment necessary to meet your requirements, and we do not authorize others to assume such obligations for us. Further, we assume no liability and extend no warranties, express or implied, for the use of this product with a non-potable water source. CULLIGAN'S OBLIGATIONS UNDER THIS WARRANTY ARE LIMITED TO THE REPAIR OR REPLACEMENT OF THE FAILED PARTS OF THE WATER CONDITIONER, AND WE ASSUME NO LIABILITY WHATSOEVER FOR DIRECT, INCIDENTAL, CONSEQUENTIAL, SPECIAL, GENERAL, OR OTHER DAMAGES.

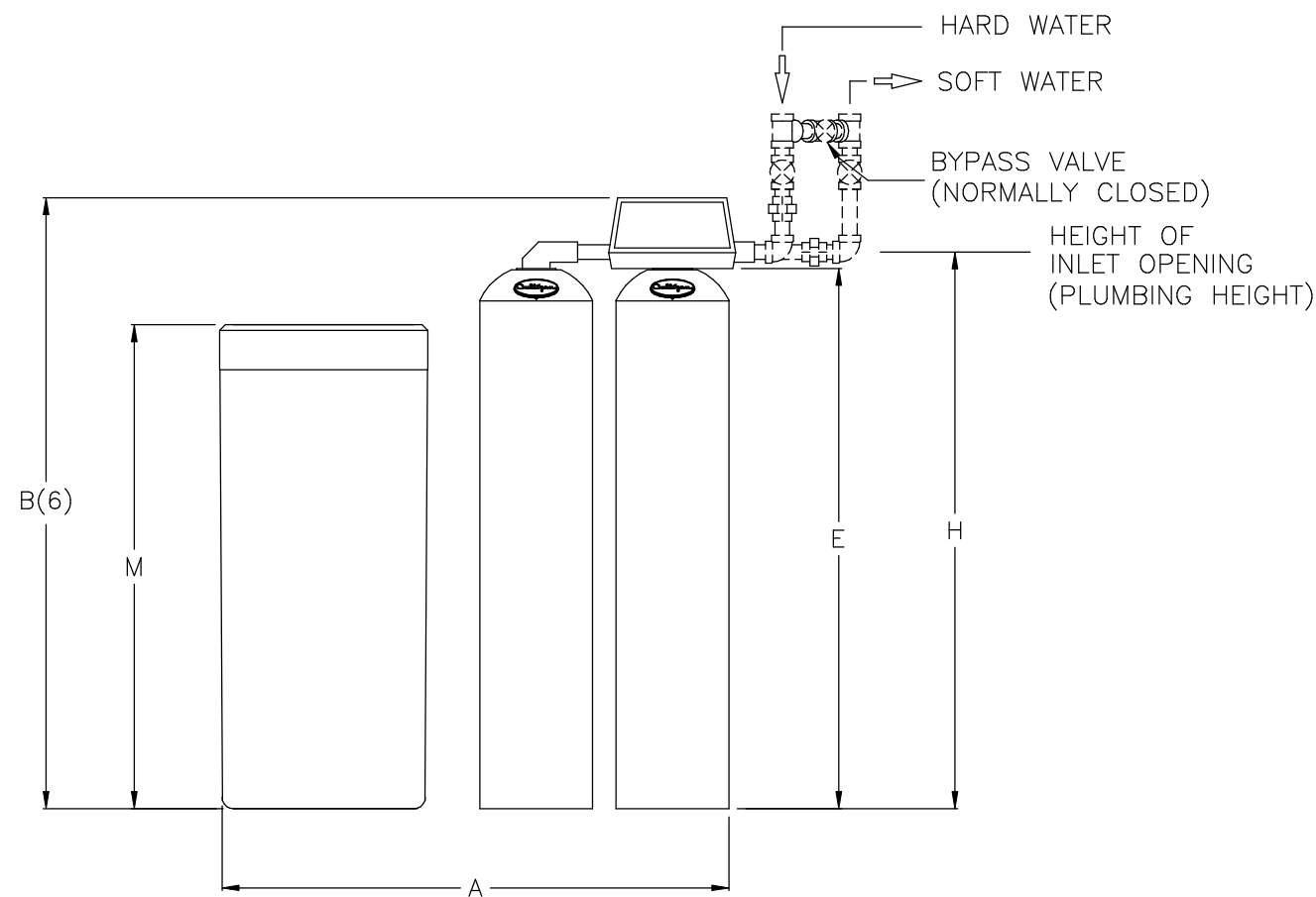
Some states do not allow the exclusions of implied warranties or limitations on how long an implied warranty lasts, so the above exclusion may not apply to you. Similarly, some states do not allow the exclusion of incidental or consequential damages, so the above limitation or exclusion may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Consult your telephone directory for your local independently operated Culligan dealer, or write Culligan International Company for warranty and service information.

**CULLIGAN INTERNATIONAL COMPANY
One Culligan Parkway
Northbrook, Illinois 60062**

DIMENSIONS (INCHES)													UNIT DATA (PER TANK)							
MODEL	WIDTH A	HEIGHT B(6)	DEPTH C	TANK DIA. D	SIDE- SHELL E	INLET/OUTLET PIPE SIZES F	DRAIN SIZE G	FLOOR TO INLET H	CENTER TO OUTLET I	INLET TO OUTLET J	BRINE TANK DIA. L	BRINE TANK HEIGHT M	MAX. CAPACITY KGR @ SALT DOSAGE	RESIN VOLUME ft ³	CONTINUOUS FLOW gpm @ 15 psi drop	PEAK FLOW gpm @ 25 psi drop	DRAIN FLOW gpm	MIN. DRAIN PIPE SIZE IN.	DUPLEX OPER. WT. lbs.	DUPLEX SHIP. WT. lbs.
SMS-61	45	54	18	9	48	1.0	0.5	49.5	7.5	2.2	18	43	30 @ 15	1	15	20	2	0.5	760	290
SMS-91	47	60	18	10	54	1.0	0.5	55.5	7.5	2.2	18	43	45 @ 23	1.5	15	20	3.5	0.5	940	410
SMS-181	65	51	18	16	43	1.0	0.5	45.0	7.5	2.2	24	42	90 @ 45	3	15	20	5	0.5	1600	700



TOP VIEW



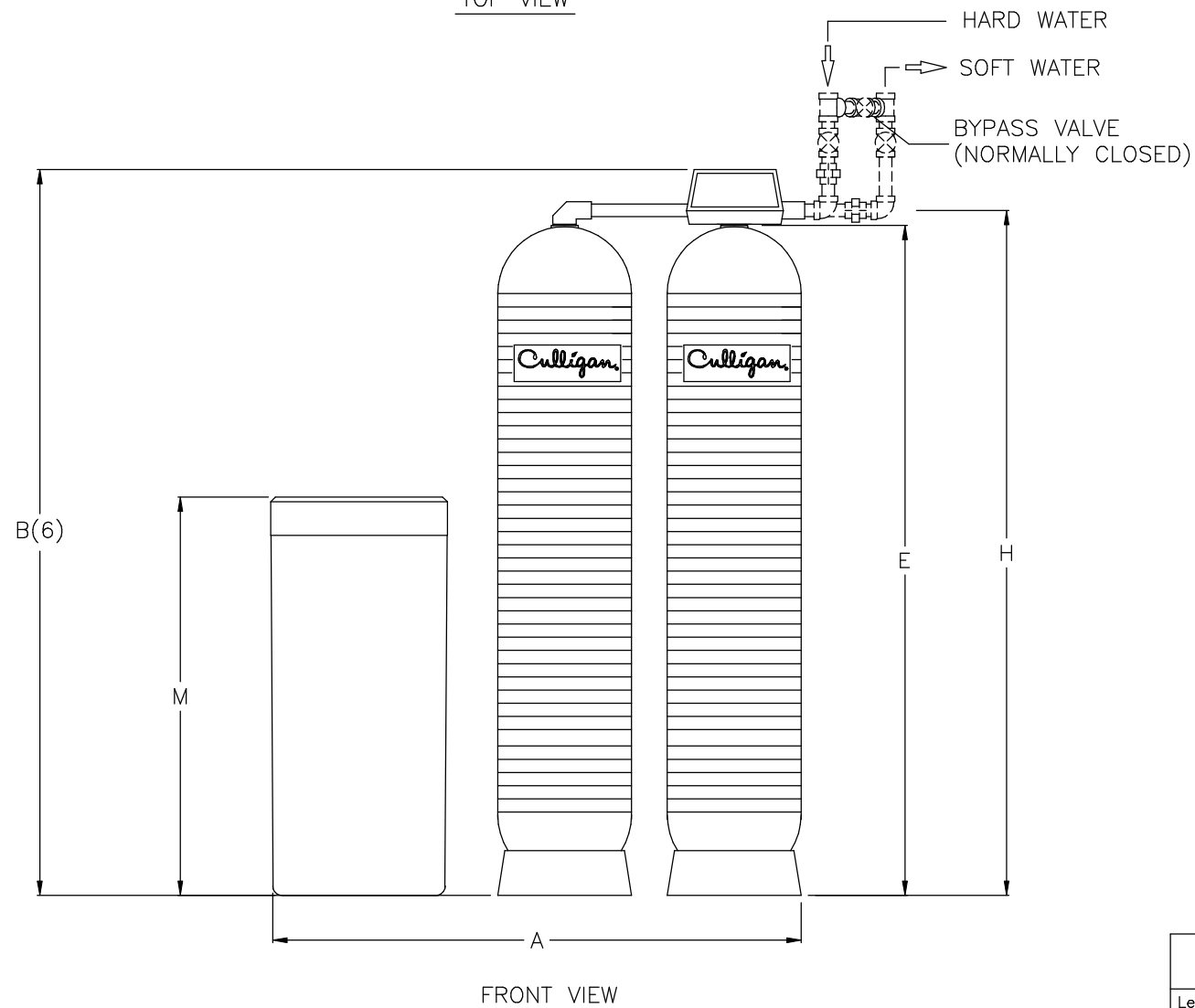
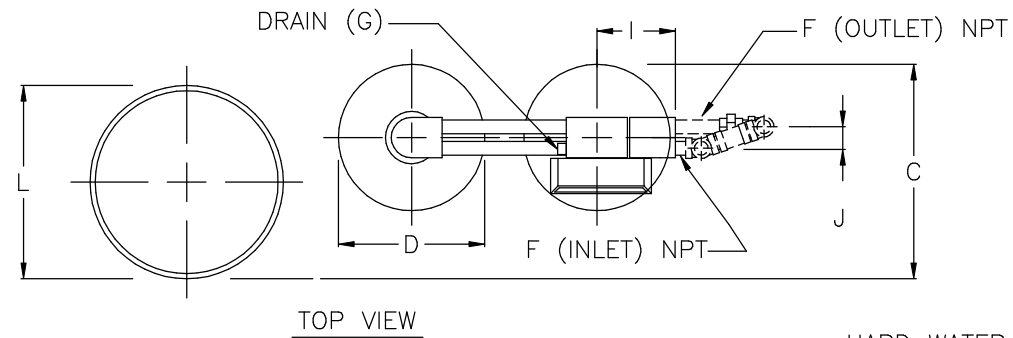
FRONT VIEW

NOTES:

- (1) ITEMS SHOWN IN BROKEN LINES TO BE FURNISHED BY OTHERS.
- (2) ALL DIMENSIONS ARE ± 1 INCH (25mm) AND SUBJECT TO CHANGE WITHOUT NOTICE.
- (3) UNIONS SHOULD BE LOCATED ON INLET AND OUTLET CONNECTIONS OF CONTROL VALVE TO FACILITATE SERVICING.
- (4) THE USE OF DISSIMILAR METALS IN A PIPING SYSTEM IS NOT RECOMMENDED. WHERE DISSIMILAR METALS MUST BE CONNECTED IN A WATER SYSTEM. THE USE OF NONCONDUCTIVE (DIELECTRIC) FITTINGS MAY REDUCE GALVANIC CORROSION.
- (5) AN ELECTRICAL OUTLET SHOULD BE PROVIDED WITHIN 5 FEET OF THE EQUIPMENT.
- (6) ALLOW A MINIMUM OF 24 INCHES ABOVE SOFTENER FOR FILLING.
- (7) TO PERMIT THE OBSERVATION OF THE DRAIN FLOW DO NOT MAKE A DIRECT CONNECTION TO THE DRAIN. PROVIDE AN AIR GAP OF AT LEAST FOUR TIMES THE DIAMETER OF THE DRAIN PIPE OR CONFORM TO LOCAL SANITATION CODES.
- (8) THE SMS-61 (9") AND THE SMS-91 (10") HAVE THE NEW QUADRA-HULL TANKS. THE SMS-181 (16") IS STILL USING THE TRIPLE-HULL TANK.

DO NOT SCALE DRAWING TOLERANCES: $\pm 1/8$ " UNLESS OTHERWISE NOTED					 ENGINEERED SYSTEMS NORTHBROOK, ILLINOIS PRINT AND BILL OF MATERIAL ARE NOT TO BE USED WITHOUT THE WRITTEN CONSENT OF CULLIGAN INTERNATIONAL CO.	NAME SOFT-MINDER® TWIN PLUS AUTOMATIC SOFTENERS TECHNICAL DATA SHEET		
Let.	Change	By	App	Date		DETAILED BY: KMR 2/11/04	APP. BY:	SHEET 1 OF 1
						REF. NO.	PART NO. SMS	

MODEL	DIMENSIONS (INCHES)												UNIT DATA (PER TANK)							
	WIDTH A	HEIGHT B(6)	DEPTH C	TANK DIA. D	TANK HEIGHT E	INLET/OUTLET PIPE SIZES F	DRAIN SIZE G	FLOOR TO INLET H	CENTER TO OUTLET I	INLET TO OUTLET J	BRINE TANK DIA. L	BRINE TANK HEIGHT M	MAX. CAPACITY KGR @ SALT DOSAGE	RESIN VOLUME ft ³	CONTINUOUS FLOW gpm @ 15 psi drop	PEAK FLOW gpm @ 25 psi drop	DRAIN FLOW gpm	MIN. DRAIN PIPE SIZE IN.	DUPLEX OPER. WT. lbs.	DUPLEX SHIP. WT. lbs.
SMF-185	60	76	24	14	65	1.5	1.0	70.0	14.0	3.5	24	42	90 @ 45	3	30	40	5	1.0	1600	600
SMF-245	64	74	24	16	65	1.5	1.0	68.0	14.0	3.5	24	42	120 @ 60	4	30	40	7	1.0	1750	680
SMF-365	78	80	24	21	69	1.5	1.0	74.0	14.0	3.5	24	48	180 @ 90	6	30	40	12	1.0	2000	815



NOTES:

- (1) ITEMS SHOWN IN BROKEN LINES TO BE FURNISHED BY OTHERS.
- (2) ALL DIMENSIONS ARE ± 1 INCH (25mm) AND SUBJECT TO CHANGE WITHOUT NOTICE.
- (3) UNIONS SHOULD BE LOCATED ON INLET AND OUTLET CONNECTIONS OF CONTROL VALVE TO FACILITATE SERVICING.
- (4) THE USE OF DISSIMILAR METALS IN A PIPING SYSTEM IS NOT RECOMMENDED. WHERE DISSIMILAR METALS MUST BE CONNECTED IN A WATER SYSTEM. THE USE OF NONCONDUCTIVE (DIELECTRIC) FITTINGS MAY REDUCE GALVANIC CORROSION.
- (5) AN ELECTRICAL OUTLET SHOULD BE PROVIDED WITHIN 5 FEET OF THE EQUIPMENT.
- (6) ALLOW A MINIMUM OF 24 INCHES ABOVE SOFTENER FOR FILLING.
- (7) TO PERMIT THE OBSERVATION OF THE DRAIN FLOW DO NOT MAKE A DIRECT CONNECTION TO THE DRAIN. PROVIDE AN AIR GAP OF AT LEAST FOUR TIMES THE DIAMETER OF THE DRAIN PIPE OR CONFORM TO LOCAL SANITATION CODES.
- (8) SYSTEM USES FRP TANKS WHICH MUST NOT BE SUBJECTED TO VACUUM. INSTALL SIPHON BREAK ON DRAIN LINE. INSTALL VACUUM BREAKER ON INLET PIPING IF THE SERVICE LINE IS SUBJECT TO A VACCUM.

DO NOT SCALE DRAWING TOLERANCES: $\pm 1/8$ " UNLESS OTHERWISE NOTED					 ENGINEERED SYSTEMS NORTHBROOK, ILLINOIS PRINT AND BILL OF MATERIAL ARE NOT TO BE USED WITHOUT THE WRITTEN CONSENT OF CULLIGAN INTERNATIONAL CO.	NAME SOFT-MINDER @TWIN PLUS AUTOMATIC SOFTENERS TECHNICAL DATA SHEET			
Let.	Change	By	App	Date		DETAILED BY: KMR 2/10/03	APP. BY:	SHEET 1 OF 1	
						REF. NO.	PART NO. SMF		